

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference I 423 12PC	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/006140	International filing date (day/month/year) 11 June 2003 (11.06.2003)	Priority date (day/month/year) 12 June 2002 (12.06.2002)
International Patent Classification (IPC) or national classification and IPC A61K 47/10		
Applicant IFAC GMBH & CO. KG INSTITUT FÜR ANGEWANDTE COLLOIDTECHNOLOGIE		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.
<input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
These annexes consist of a total of <u>4</u> sheets.
3. This report contains indications relating to the following items:
I <input checked="" type="checkbox"/> Basis of the report
II <input type="checkbox"/> Priority
III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
IV <input checked="" type="checkbox"/> Lack of unity of invention
V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
VI <input type="checkbox"/> Certain documents cited
VII <input type="checkbox"/> Certain defects in the international application
VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 09 January 2004 (09.01.2004)	Date of completion of this report 20 August 2004 (20.08.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

Form PCT/IPEA/409 (cover sheet) (July 1998)

Best Available Copy

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/006140

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages _____ 1-19 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____ 1-14 _____, filed with the letter of _____ 10 August 2004 (10.08.2004)
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☐ not complied with for the following reasons:

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
- ☐ the parts relating to claims Nos. _____

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 3	YES
	Claims	4 - 14	NO
Inventive step (IS)	Claims		YES
	Claims	1 - 14	NO
Industrial applicability (IA)	Claims	1 - 14	YES
	Claims		NO

2. Citations and explanations

See Supplemental Box

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: IV and V

- 1) The present application relates to the use of ether-alcohols as solvents, dissolving intermediaries or dispersing agents for organic compounds (claims 1 and 2) and as dispersing agents or as a continuous phase for pigment dispersions (claims 1, 3 and 14). Further, the application relates to the use of ether-alcohols in the preparation of ether-alcohol/polyol-in-oil emulsions (claims 4-13).

The application was restricted with respect to the definition of the ether-alcohols used, which now comprises only monoalkylated C_{1-3} polyethylene glycols ($n = 7-15$ or $n = 7-50$). The amendments are supported by the description as filed (in particular page 4).

- 2) Reference is made to the following documents:

D1: WO 01 01960 A
D2: US-A-4 113 649
D3: GB-A-2 242 686
D4: WO 95 24179 A
D5: WO 96 39119 A
D6: WO 95 03781 A
D7: GB-A-2 004 746
D8: WO 97 44049 A
D9: US-A-2 907 670
D10: JP 04 308216 A
D11: WO 00 49099 A
D12: WO 92 07627 A

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Supplemental Box

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Continuation of: IV and V

3) Novelty

The restricted subject matter of the claims may be considered a novel selection over D1, D4, D5 and D9.

D2 describes polyethylene glycol diethers, not polyethylene glycol monoethers.

D3 and D6-D8 describe propoxylates, which fall outside the claimed subject matter.

D10 describes alkoxylated C₄₋₁₈ ethoxylates, which fall outside the claimed subject matter.

D11 describes phosphates of alkoxylated ethoxylates as dispersing agents for pigments.

The claimed subject matter may therefore be considered novel over D1-D11.

However, D12 describes corresponding compounds that may be used as a base medium for defined protective agents, in which these protective agents are dissolved in the base medium or are present in some cases as a dispersion (cf. pages 14 and 17-19). In light of D12 the subject matter of claims 1-3 cannot be considered novel.

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Continuation of: IV and V

4) Unity of invention

Use of the relevant compounds as solvents was already known from D12.

In relation to this prior art, any novel aspects of the use of ether-alcohols as solvents or dissolving intermediaries, for example, in the preparation of polyol/oil emulsions, lack a further basis of mutuality with the use of ether-alcohols in pigment dispersions in which active substances are not present in dissolved form.

5) Inventive step

The possibility of using monoalkoxylated ethoxylates (generically defined) as dissolving intermediaries was already known from D1, D4 and D5; their use in preparing oil emulsions has also been described (D4/D5).

Use of the specific compounds defined in the present application to similar purpose would therefore appear obvious to a person skilled in the art (claims 1-2, 4-13).

The argument that the relevant compounds are surprisingly suitable for the preparation of polyol/oil or polyol/oil/water emulsions is unconvincing, since (a) claims 1 and 2 do not

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Continuation of: IV and V

relate to solutions intended for use in the preparation of such emulsions and (b) D4 and D5 directly indicate that such compounds may be incorporated in such emulsions (D4: pages 6 and 23-24; D5: page 6).

D9 further discloses that monoalkoxylated ethoxylates (generically defined) may also be used as dispersing agents for pigments. On the basis of the general teaching of D9, use of the claimed compounds to this purpose would be considered obvious by a person skilled in the art (claims 1, 3 and 14).

In this connection the definition as a sunscreen (claim 14) does not imply any particular features that would substantiate inventive step. Although D9 does not relate specifically to sunscreens, the teaching of D9 relates to pigment dispersions in general. Further features associated with sunscreens would seem routine to a person skilled in the art (cf. D11).